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ABSTRACT

A longitudinal study tested the hypotheses that in relation to parents with an external locus of control, parents with an internal locus of control: would have a higher level of mother-infant interaction, would have more self-directing and less conforming values for children, and would have children who showed more academic competence. The initial sample consisted of 321 low-income women; all mothers were interviewed during the third trimester of pregnancy, and approximately 83 percent were interviewed at 4- and 12-months following birth. During the children's kindergarten year, interviews were completed with 233 mothers. A locus of control scale was included in interviews conducted during pregnancy, at 4 and at 12 months, and during the kindergarten year. Mothers were observed in child care situations during 4- and 12-month sessions and were rated on an attachment inventory. During 12-month and kindergarten interviews, maternal childrearing values and beliefs were measured on a version of Kohn's (1977) rank-order instrument of parental self-directing versus conforming values for children; and maternal beliefs about childrearing and education were measured on the Parental Modernity Inventory. The Classroom Behavior Inventory was used to collect teacher ratings of child academic competence and social adjustment at the end of the kindergarten year. Results indicated that maternal demographic variables, maternal locus of control, and maternal childrearing variables were intercorrelated predictors of child academic competence. (RH)

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Childrearing and Child Development Correlates of Maternal Locus of Control

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Abstract

Although extensive research has shown correlations of the individual's locus of control with family background and with competence and achievement, few studies have correlated maternal locus of control with maternal childrearing attitudes, values and behaviors and with child academic competence. A longitudinal study found that maternal locus of control during pregnancy and infancy was significantly correlated with maternal childrearing variables collected at four months, twelve months, and kindergarten and with child competence during kindergarten. Interpretations of the finding that maternal demographic variables, maternal locus of control, and maternal childrearing variables are intercorrelated predictors of child academic competence will be discussed.

Childrearing and Child Development Correlates of Maternal Locus of Control

Reviews of family origins and other social antecedents of the individual's locus of control (Lefcourt, 1982; Phares, 1976) support a relationship between locus of control and social class background. Gilmor (1978) has also reviewed evidence that a child's internal locus of control is related to academic competence and achievement. The hypothesis that is suggested by these findings, that parental locus of control would be related to parent childrearing beliefs and behaviors and would be related to the development of their child's academic competence, is supported by Harris and Nathan (1973) who found that parents with internal locus of control considered their child's behavior to be a direct consequence of their parenting.

A longitudinal study of mothers and children from pregnancy through the kindergarten year contributed to a test of hypotheses that parents with an internal locus of control would have a higher level of mother-infant interaction, would have more self-directing and less conforming values for children, and would have children who showed more academic competence in kindergarten.

Method:

The initial sample consisted of 321 low-income women who received prenatal care in health clinics and whose infants were normal at birth. Of the initial sample, 72 percent were black, 44 percent were married, and 50 percent had 12 or more years of education. All mothers had been interviewed during the third

trimester of pregnancy and approximately 83 percent were interviewed at four and at twelve months postnatally. During winter and spring of the child's kindergarten year interviews were completed with 233 or 72 percent of the initial sample of 321 mothers.

A six-item locus of control scale that was developed from items in Coleman (1966) and in Schopler, Langmeyer, Stokols, and Reisman (1973) was included in the extensive interviews during pregnancy, at four and at twelve months. The three items that were significantly intercorrelated were summed for a total infancy locus of control score. The eight locus of control items used in the kindergarten interview (see Appendix) contributed significantly to the total kindergarten locus of control scale.

Mothers were observed during child care situations of bathing, dressing, and play during the four month and twelve month sessions in the home. After leaving the home, each of the two observers rated the mother on an Attachment Inventory that yielded major factors of maternal interaction and stimulation and of punitiveness/irritability. Maternal behavior items that were organized into clusters were arranged in a sequential order of neighboring within the two dimensional space (Schaefer & Hunter, 1983).

Maternal childrearing values and beliefs were measured with a version of Kohn's (1977) rank order of parental self-directing versus conforming values for children during the twelve month and kindergarten interviews. Maternal beliefs about childrearing and

education were measured with the Parental Modernity Inventory (Schaefer & Edgerton, in press) that yields a total score and subscores for progressive democratic beliefs and for traditional authoritarian beliefs. Both the rank order of values and parental modernity scores have shown significant correlations with child academic competence and with parent demographic characteristics in cross-sectional research (Schaefer & Edgerton, in press). Scales for mothers' self-reports of educational behavior that also correlated with child academic competence in that research, of providing educational experiences, talking with the child, and sharing activities as well as a scale that reported age at which specific skills were taught, were also administered during the kindergarten interview.

The Classroom Behavior Inventory (Schaefer, 1981; Schaefer & Edgerton, 1977) was used to collect teacher ratings of child academic competence and social adjustment at the end of the kindergarten year. Reliability and validity data have supported the usefulness of the scales in studies of child adaptation in the classroom (Kohn, 1977; McKinney & Forman, 1982; Schaefer, 1981).

Results:

Internal consistency reliabilities using Cronbach's alpha of the three-item infancy locus of control scale were .54 during pregnancy, .64 at four months, and .65 at one year. Test-retest correlations were .57, .59, and .52 with the reliability of the combined scores estimated as .79. Cronbach's alpha for the eight item kindergarten locus of control score was .84 and the correlation between the total infancy and the kindergarten locus

of control scores was .47. Although the reliability and stability estimates are low for individual prediction, they are high enough to explore maternal childrearing and child development correlates of maternal locus of control.

Substantial correlations of the total infancy locus of control score with maternal behavior at both four and twelve months and maternal values at twelve months are reported in Table 1. Achievement press, stimulation, and interaction with the infant scales have higher correlations with locus of control than scales of punitiveness and irritability, yet maternal locus of control is also correlated with pleasure in parenting, responsiveness, unresponsiveness, and insensitivity to the child's needs.

Insert Table 1 About Here

Consistent and significant correlations of both infancy and kindergarten locus of control with maternal childrearing beliefs, values for children, and self-reports of educational behaviors from the kindergarten interview are reported in Table 2. Maternal internal locus of control is correlated with progressive democratic childrearing beliefs, self-directing values for children, and self-reports of providing educational experiences in the family and community, of talking with the child, of sharing educational activities with the child, and of teaching academic skills at an early age. Maternal external locus of control is correlated with traditional authoritarian childrearing and educational beliefs and with conforming values for children.

Insert Table 2 About Here

Although correlations are found between both the infancy and kindergarten locus of control scores and teacher ratings of child curiosity and creativity and verbal intelligence, correlations with social behaviors of extraversion and considerateness are very low and insignificant (see Table 3). The similar correlations for the infancy and kindergarten locus of control scores support a conclusion that maternal internal locus of control is correlated with child academic competence.

Insert Table 3 About Here

Discussion:

Despite short three- and eight-item scales with moderate internal consistency reliabilities and different items in the locus of control scales for infancy and kindergarten, significant stability of maternal locus of control from infancy to kindergarten was found. Both of the different and moderately intercorrelated infancy and kindergarten scales are significantly correlated with maternal behavior during infancy, with maternal childrearing beliefs and maternal values for children, and with maternal self-reports of educational behaviors during kindergarten. Thus the evidence is clear that maternal locus of control is significantly correlated with maternal behavior and childrearing beliefs and values.

Correlations of maternal locus of control are much larger with maternal educational behaviors of achievement press, stimulation, and interaction than with maternal social-emotional behaviors of irritability and punitiveness with the child. Similarly maternal locus of control is significantly correlated with child academic

competence scales of curiosity/creativity and verbal intelligence but insignificantly correlated with child social and emotional behaviors of extraversion and considerateness. Thus maternal locus of control is more highly correlated with maternal and child competence than with maternal and child social and emotional behaviors. Apparently locus of control is one indicator of individual competence or modernity (Inkeles & Smith, 1974). Indices of individual competence and modernity are significantly correlated with indices of parental modernity in childrearing beliefs, values and behavior that are, in turn, correlated with child academic competence (Schaefer & Edgerton, in press).

Generalization of the findings of this and earlier studies of locus of control suggest a model for the interrelationships of maternal demographic characteristics, psychological characteristics, locus of control, childrearing beliefs and behavior, and child academic competence that is shown in the Figure. Locus of control can be interpreted as one of a set of maternal demographic, psychological, and childrearing variables that collectively describe the child's psychosocial environment. An interpretation of locus of control as an indicator of maternal competence and of individual modernity is supported by Inkeles and Smith's (1974) finding that a sense of efficacy is substantially correlated with overall modernity in six developing countries. Schaefer and Edgerton's (in press) hypothesis that maternal individual modernity is correlated with modern parenting beliefs and behaviors is supported by findings that locus of control is correlated with other maternal variables that describe the psychosocial environment that influences child competence.

Measure of locus of control might contribute to selection of effective early child care and education personnel. The goal of increasing a parent's internal locus of control and sense of efficacy in rearing their child might complement current goals of teaching parent behaviors and of developing childrearing beliefs and parental values that contribute to child adaptation. Longitudinal and cross-sectional analysis of parent and child correlates of maternal locus of control might contribute to the selection of parents in need of parent education programs, to the development of goals for such programs, and to methods for evaluating program effects.

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Table 1

Correlations of Maternal External Locus of Control with Maternal Values and Behaviors in Infancy
N = 230

Values and Behaviors at	Locus of Control (Total Score) 4 months	12 months
Self-directing values	--	-38***
Conforming values	--	41***
Achievement press	-45***	-42***
Stimulation	-45***	-44***
Interaction	-43***	-41***
Low interaction	36***	33***
Pleasure in parenting	-36***	-36***
Responsiveness	-29***	-39***
Unresponsiveness	33***	32***
Insensitiveness	21**	37***
Irritability	22**	25***
Punitiveness	21**	16*

Significance *p < .05
**p < .01
***p < .001

Decimal points omitted.

Table 2

Correlations of Maternal External Locus of Control with Maternal Beliefs, Values, and Behaviors in Kindergarten
N = 189 - 233

Beliefs, Values, Behaviors at Kindergarten	Locus of Control Infancy	Locus of Control Kindergarten
Progressive, democratic beliefs	-29***	-20**
Traditional, authoritarian beliefs	39***	36***
Total modernity score	-45***	-39***
Self-directing values	-39***	-32***
Conforming values	41***	38***
Providing educational experiences	-40***	-31***
Age of teaching academic skills	17*	24***
Talking with child	-31***	-23***
Sharing activities with child	16*	-13*

Significance $^{*}p < .05$

$^{**}p < .01$

$^{***}p < .001$

Decimal points omitted.

Table 3

Correlations of Maternal External Locus of Control with Teacher Ratings of Child Behavior During Kindergarten

Teacher Ratings on Classroom Behavior Inventory	N = 186 Locus of Control Infancy	N = 223 Locus of Control Kindergarten
Extraversion	-03	-09
Curiosity/Creativity	-18*	-20**
Verbal Intelligence	-23**	-19**
Independence	-08	-10
Task-Orientation	-03	-06
Considerateness	00	-04

Significance $^{*}p < .05$

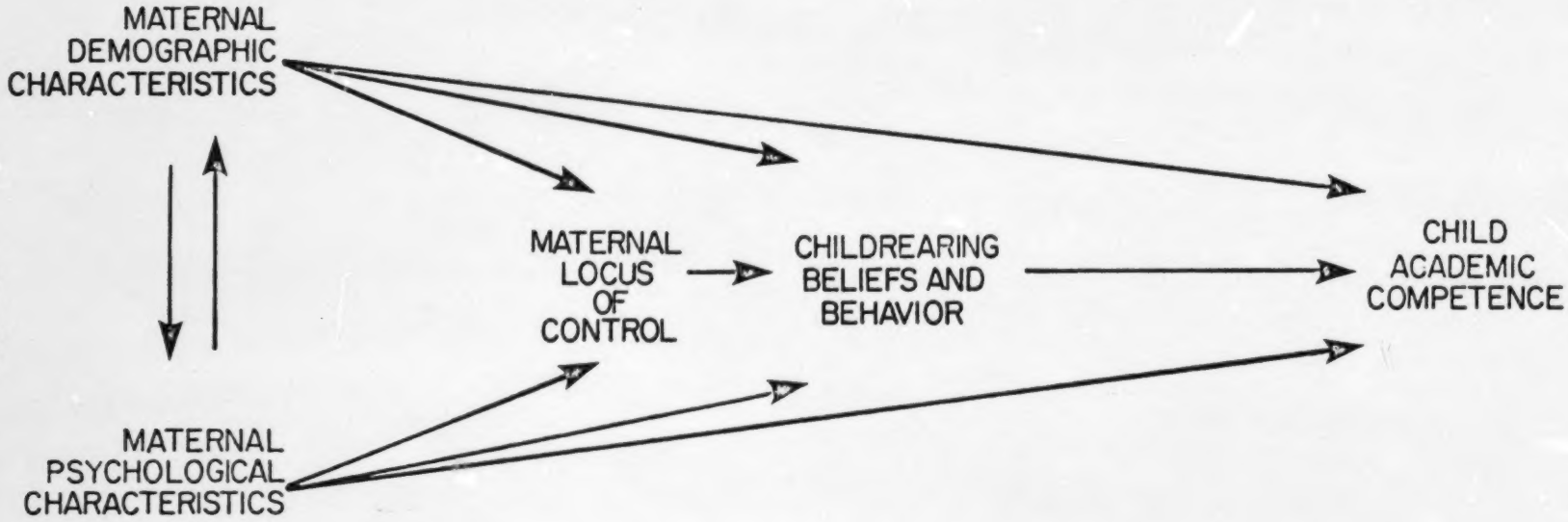
$^{**}p < .01$

$^{***}p < .001$

Decimal points omitted.

FIGURE

A MODEL FOR MATERNAL AND CHILD CORRELATES OF MATERNAL LOCUS OF CONTROL



APPENDIX

Locus of Control Items During Pregnancy (P), Infancy (I), and Kindergarten (K)

Locus of Control Items	Interview
Being responsible for a child is more than I might be able to manage.	P, I
When there are decisions to be made, what I say makes little difference.	P, I, K
I have little chance to get ahead in life unless I have a lot of luck.	P, I, K
Some of the best things that have happened in my life were due to luck.	K
I am happiest when I don't have to make decisions.	K
Things just happen to me and there's not much I can do about it.	K
Good luck is more important than hard work for success.	K
People like me don't have much of a chance to be successful in life.	K
Everytime I try to get ahead, something or somebody stops me.	K